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09/675,033	09/28/2000	Blair B.A. Birmingham	ATI-000090	7656

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EXAMINER
PATEL, HARESH N

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/675,033	Applicant(s) BIRMINGHAM, BLAIR B.A.
	Examiner Haresh Patel	Art Unit 2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 25 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-25 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 28 September 2000 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-27 are presented for examination.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.
(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino

acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected to because of the following informalities:

i. Detailed description of the invention section is missing.

ii. The section header "Detailed Description Of The Figures" on page 4 should be "DETAILED DESCRIPTION OF THE INVENTION".

Appropriate correction is required.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Method and System for using multiple operating systems concurrently within a single system".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 5-21, 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Houha et al. 6,393,585 (Hereinafter Houha).

6. As per claims 1, 7 and 18, Houha teaches the following:

a method comprising,

a computer readable medium tangibly embodying a plurality of instructions (e.g., OS Flash memory, first memory, figure 3), said plurality of instructions including,

an information handling system (e.g., set-top box system, abstract) comprising:

providing a plurality of operating systems on a single information handling device (e.g., set-top box system, abstract), the plurality of operating systems including an appliance operating system to control the information handling device to operate an appliance (e.g., application program related operating system stored in the memory, abstract), and a general operating system to perform general information handling tasks (e.g., first operating system, abstract);

executing the appliance operating system to control an appliance (e.g., second operating system, figure 3) wherein the appliance operating system is independent of the general operating system (e.g., second operating system, figure 3); and

executing the general operating system to control the information handling device to perform general information handling tasks (e.g., first operating system, figure 3),

instructions to implement an appliance operating system on a general purpose information handling system (e.g., first and second operating systems, figure 3);

said information handling system to perform general information handling tasks using a general using a general operating system (e.g., first and second operating systems, figure 3);

said appliance operating system to control at least one appliance (e.g., second operating systems, figure 3), wherein

said appliance operating system is independent of said general operating system (e.g., second operating systems, figure 3),

a data processor (e.g., CPU, figure 1);

a bios to provide initial processor control (e.g., CPU, figure 1);

a memory coupled to said processor (e.g., RAM, figure 1);

a communications interface (e.g., Digital TV channels, figure 1); and

a plurality of operating systems to be executed by said processor (e.g., switching first and second operating systems, figure 3), said plurality of operating systems including;

a general operating system capable of performing general information handling tasks(e.g., first operating system, figure 3); and

an appliance operating system capable of controlling, through said communications interface, at least one appliance, wherein said appliance operating system is independent of said general operating system (e.g., second operating systems, figure 3).

7. As per claims 2, 3, 5 and 6, Houha teaches the following:

the method as in Claim 1, further including switching between operating systems (e.g., switching first and second operating systems, col. 2, line 39 – col. 3, line 23),

the method as in Claim 2, wherein switching includes discontinuing the execution of one operating system prior to executing another operating system (e.g., switching first and second operating systems, col. 2, line 39 – col. 3, line 23),

the method as in Claim 1, wherein: executing the appliance operating system includes reading the appliance operating system from a non-volatile memory circuit; and executing the

general operating system includes reading the general operating system from a mass storage device (e.g., switching first and second operating systems, figure 3),

the method as in Claim 1, wherein executing includes checking for resource conflicts (e.g., boot-loader detects any anomaly associated with execution of second operating system once downloaded, col. 2, lines 50-60).

8. As per claims 8-17, Houha teaches the following:

said bios is to control which of said plurality of operating systems is executed (e.g., boot-loader program downloads the operating system, figure 2),

said memory includes random access memory and read-only memory; and

said information handling system further includes a mass storage medium,

said general operating system is stored in said mass storage medium (e.g., first operating system, figure 3), and

said appliance operating system is stored in said read-only memory (e.g., second operating system, figure 3),

including one or more appliances to be coupled to said at least one communications interface (e.g., Digital TV channels, figure 1),

one or more appliances are to be coupled to said communications interface via a network (e.g., set-top box system connected to the network, figure 3),

said one or more appliances are media handling systems (e.g., Digital TV channels, figure 1),

said one or more media handling systems include at least one of an audio device and a visual device (e.g., MPEG audio, MPEG video, figure 1),

said communications interface is a wireless interface (e.g., Digital TV channels, figure 1),

said communications interface is an electrical interface (e.g., Digital TV channels, figure 1),

a resource conflict check is performed when said operating systems are executed (e.g., boot-loader detects any anomaly associated with execution of second operating system once downloaded, col. 2, lines 50-60).

9. As per claims 19-21, 23-25, Houha teaches the following:

said plurality of instructions further includes instructions to control which of said operating systems is executed (e.g., boot-loader, figure 3),

execution of said general operating system is terminated before switching to said appliance operating system (e.g., boot-loader is executed after one operating system is terminated and before another operating system is loaded, figure 3),

execution of said appliance operating system is terminated before switching to said general operating system (e.g., boot-loader is executed after one operating system is terminated and before another operating system is loaded, figure 3),

said at least one appliance is a media handling system (e.g., Digital TV channels, figure 1),

said at least one media handling system includes at least one of an audio device and a visual device (e.g., MPEG audio, MPEG video, figure 1),

said plurality of instructions further includes instructions to check for resource conflicts (e.g., execution of first and second operating system by the boot-loader, figure 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 4 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houha in view of Bugnion et. al. 6,496,847 (Hereafter Bugnion).

Houha does not specifically show the limitations of claims 4 and 22.

As per claims 4 and 22, Bugnion teaches the following:

switching includes executing two or more of the plurality of operating systems concurrently (e.g., ability to run multiple arbitrary operating systems concurrently, col. 4, lines 29-32),

said general operating system and said appliance operating system are executed concurrently (e.g., ability to run multiple arbitrary operating systems concurrently, col. 4, lines 29-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Houha with the teachings of Bugnion in order to facilitate general operating system to do the independent tasks without affecting the application operating

system, which runs concurrently and provides continuous support to the entertainment peripheral to operate.

Conclusion

11. The following prior art is cited but not relied upon:

a. 6,327,653, Lee. Lee teaches technique for easily changing operating systems of a digital computer system, which includes a memory, a CPU, a backup memory and multiple operating systems for the necessary applications.

b. 6,542,926, Zalewski et al.. Zalewski teaches dynamically assignment of operating systems within a single system.

c. 4,675,814, Murai et al.. Murai teaches a data processing system in which one of several operating systems stored in the auxiliary storage is selectively loaded to the main storage so that an application program is run under the selected operating system.

d. 6,381,682, Noel et al. Noel teaches method and apparatus having multiple instances of operating systems executing cooperatively in a single multiprocessor computer wherein all processors and resources are electrically connected together.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haresh Patel whose telephone number is (703) 605-5234. The examiner can normally be reached on Monday-Friday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee, can be reached at (703) 305-8498.

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 306-5404.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Haresh Patel

July 1, 2003.

JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100